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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,146

04/26/2006

Yuzo Senda

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EXAMINER

JEANGLAUDE, JEAN BRUNER

ART UNIT

PAPER NUMBER

2819

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/577,146

Applicant(s)

SENDA, YUZO

Examiner

Jean B. Jeanglaude

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 19-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 4-26-06; 1-12-07.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Specification

It is suggested to incorporate on page 1, a subtitle as " Continuing Data – and incorporate the information of the continuing data in a paragraph followed the subtitle.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 27 - 30 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 27 – 30 are not limited to tangible embodiment. The computer program has to be tangibly stored on a computer readable medium in order to cause a computer to perform its functions.

MPEP 2106, IV. B1 (a) indicates that in order to enable performance of the steps on a computer, the article embodying the corresponding program should be characterized as a " computer-readable medium ". As such, claims 27 – 30 would be considered statutory under 35 U.S.C. 101.

Moreover, merely **"decoding data necessary for stream grammar analysis and updating said probability estimate values"** in claims 27, 28 and **"estimating the relation between the number of binary symbols and the number of code bits"** in claims 29, 30 would not appear to be sufficient to constitute a tangible result, since the outcome of the **"decoding data necessary for stream grammar analysis and updating said probability estimate values"** in claims 27, 28 and **"estimating the**

**relation between the number of binary symbols and the number of code bits”** in claims 29, 30 step has not been used in a disclosed practical application nor made available in such a manner that it is usefulness in a disclosed practical application can be realized. In this particular instance, the tangible step has to be at the end of the independent claims which can be either store or display or output or use the information in the tangible result.

(See <http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>)

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

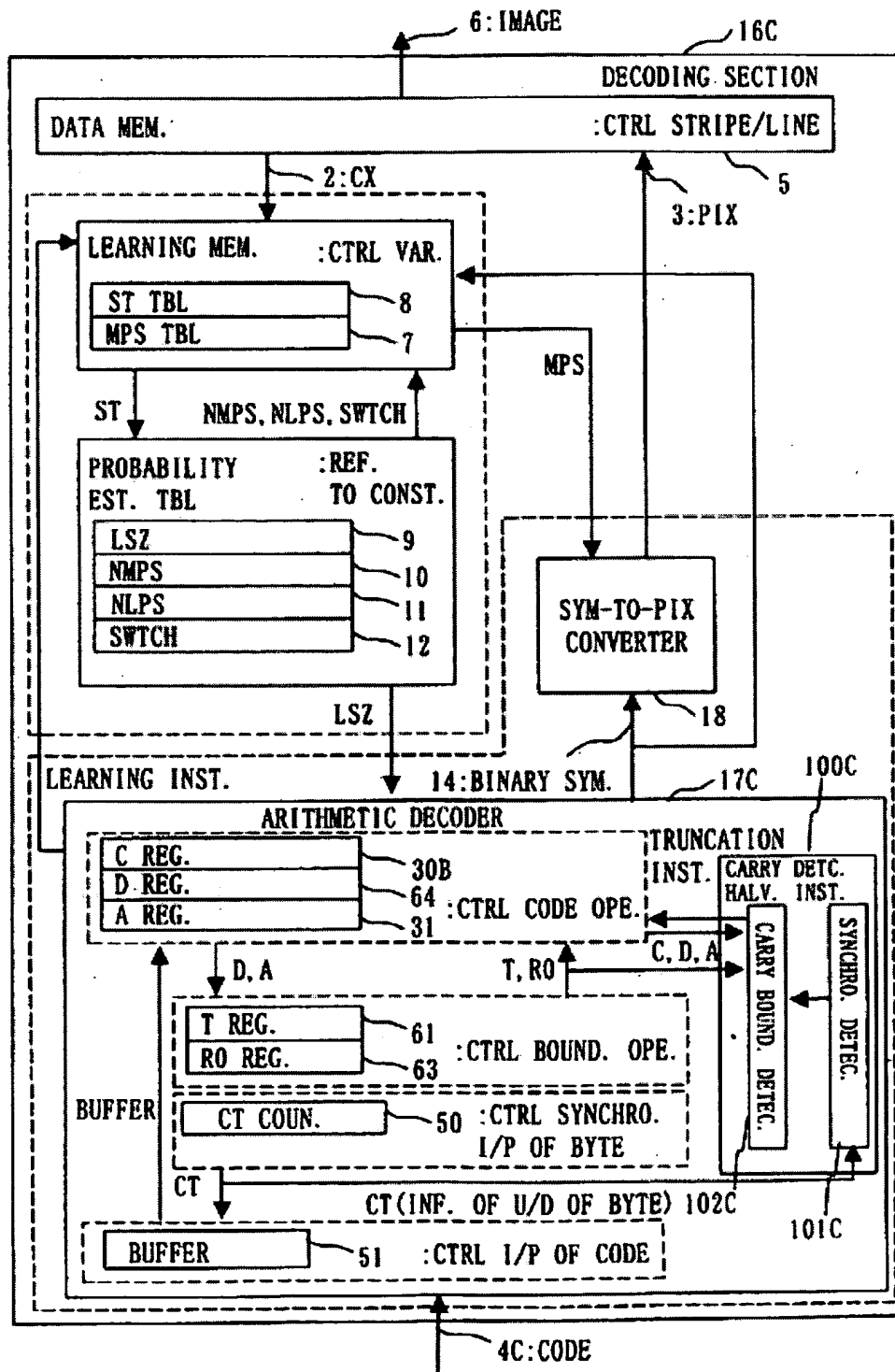
2. Claims 19 – 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Kimura et al. (US Patent Number 6,373,408).

3. Regarding claims 19, 23, Kimura et al. discloses decoder of binary arithmetic code and method (fig. 3) comprising: a memory (label as probability estimation table in fig. 3) for storing probability estimate values of arithmetic code that are necessary for decoding (abstract, fig. 3); an arithmetic code decoder (17C, fig. 3) for using the probability estimate values to decode binary arithmetic code that is received as input to obtain binary symbols (col. 13, lines 22 – 26) ; a buffer (51, fig. 3) for accumulating said binary symbols that have been decoded; a first data decoder for extracting said binary symbols from said buffer to decode said binary symbols and obtain output data (abstract); and a second data decoder for, based on said binary symbols that have been

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decoded, decoding data that are necessary for stream grammar analysis and updating said probability estimate value (abstract; col. 13, lines 36 – 39).

Fig. 3



4. Regarding claims 20, 24, Kimura et al. discloses a decoder of arithmetic code and method (fig. 3) comprising: a memory (label as probability estimation table in fig. 3) for storing probability estimate values of arithmetic code that are necessary for decoding; an arithmetic code decoder (17C, fig. 3) for using said probability estimate values to decode multivalued arithmetic code that is received as input to obtain multivalued symbols (col. 13, lines 22 – 26); a buffer (51, fig. 3) for accumulating said multivalued symbols that have been decoded (abstract); a first data decoder for extracting multivalued symbols from said buffer to decode said multivalued symbols and obtain output data (fig. 3); and a second data decoder for, based on said multivalued symbols that have been decoded, decoding data that are necessary for stream grammar analysis and updating said probability estimate values (abstract; col. 13, lines 36 – 39).

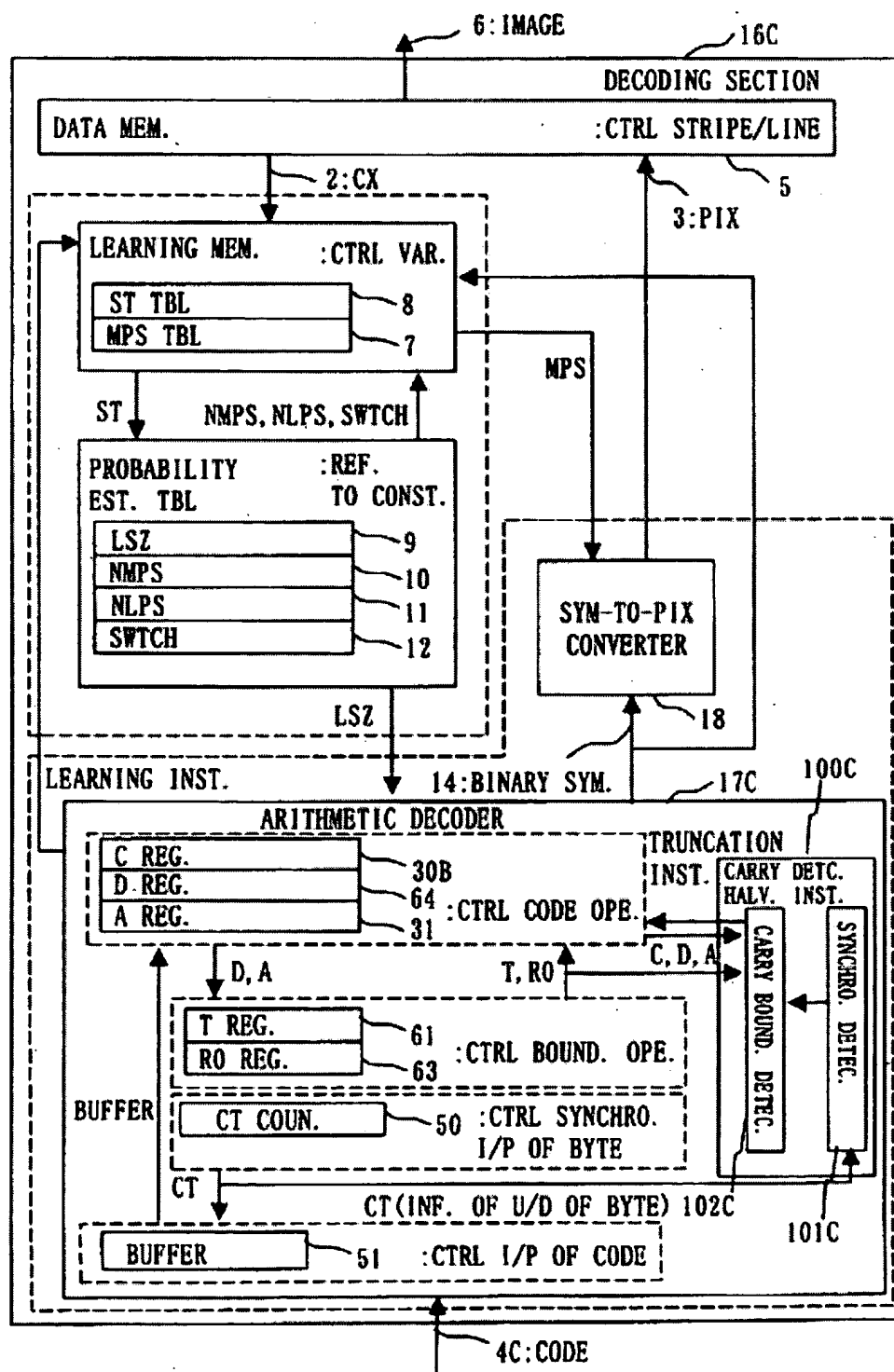
5. Regarding claims 21, 25, Kimura discloses an encoder of binary arithmetic code and method (fig. 2) , comprising: a binarization unit (15, fig. 2) for converting binary arithmetic code that has been received as input to binary symbols; a buffer (51) for accumulating said binary symbols; an arithmetic encoder (13C, fig. 2) for extracting binary symbols from said buffer to generate arithmetic code; and a bit number estimation unit (label as probability estimation) for estimating the relation between the number of binary symbols and the number of code bits from the number of binary symbols that have been extracted by said arithmetic encoder and the number of code bits that have been generated, and for estimating the number of code bits that are

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generated after arithmetic encoding from the amount of accumulation of said buffer (col. 12, lines 60 – 67).



**Fig. 3**



6. Regarding claims 22, 26, Kimura et al. discloses an encoder of arithmetic code and method (fig. 2) , comprising: a multivalued conversion unit (15, fig. 2) for converting multivalued arithmetic code that has been received as input to multivalued symbols; a buffer (51) for accumulating said multivalued symbols; an arithmetic encoder (13C, fig. 2) for extracting multivalued symbols from said buffer and generating arithmetic code; and a bit number estimation unit (label as probability estimation) for estimating the relation between the number of multivalued symbols and the number of code bits from the number of multivalued symbols that have been extracted by said arithmetic encoder and the number of code bits that have been generated, and for estimating the number of code bits that are generated after arithmetic encoding from the amount of accumulation of said buffer (col. 12, lines 60 – 67).

7. Regarding claim 27, Kimura et al. discloses a program for causing a computer having a buffer for accumulating binary symbols that have been decoded to execute steps, said program causing said computer to execute (fig. 3; col. 30, lines 38 – 67): an arithmetic code decoding step of using said probability estimate values to decode binary arithmetic code that has been received to obtain binary symbols (17C, fig. 3; col. 13, lines 22 – 26); a first data decoding step of extracting said binary symbols from said buffer to decode binary symbols and obtain output data; and a second data decoding step of, based on said binary symbols that have been decoded, decoding data necessary for stream grammar analysis and updating said probability estimate values (abstract; col. 13, lines 36 – 39).

8. Regarding claim 28, Kimura et al. discloses a program for causing a computer having a buffer for accumulating multivalued symbols that have been decoded to execute steps, said program causing said computer to execute (fig. 3; col. 30, lines 38 – 67): an arithmetic code decoding step of using said probability estimate values to decode multivalued arithmetic code that has been received as input to obtain multivalued symbols (17C, fig. 3; col. 13, lines 22 – 26); a first data decoding step of extracting said multivalued symbols from said buffer to decode said multivalued symbols and obtain output data; and a second data decoding step of, based on said multivalued symbols that have been decoded, decoding data necessary for stream grammar analysis and updating said probability estimate values (abstract; col. 13, lines 36 – 39).

9. Claim 29, is rejected on the base basis as claim 25. The only difference is that the program is incorporated in a computer. Kimura et al.'s system as seen in col. 30, lines 38 – 67 is incorporated in a computer to be executed.


10. Claim 30 is rejected on the same basis as claim 30. The only difference is that the program is incorporated in a computer. Kimura et al.'s system as seen in col. 30, lines 38 – 67 is incorporated in a computer to be executed.

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on 571-272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jean Bruner Jeanglaude  
Primary Examiner  
March 12, 2007